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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/806,884

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Rainer Fackert

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FRISHAUF, HOLTZ, GOODMAN & CHICK, PC  
767 THIRD AVENUE  
25TH FLOOR  
NEW YORK, NY 10017-2023

EXAMINER

TANINGCO, MARCUS H

ART UNIT

PAPER NUMBER

2878

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

**Office Action Summary**

Application No.

10/806,884

Applicant(s)

FACKERT, RAINER

Examiner

Marcus H. Taningco

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 5-7, 9-14 and 18-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/14/04, 9/13/04, 1/</u>  | 6) <input type="checkbox"/> Other: ____                                     |

## DETAILED ACTION

### Claim Objections

Claim 4 is objected to because of the following informalities: The term “detect” should be replaced with the term “detects”. Appropriate correction is required.

### Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 8, 15, and 16 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Shigeru (JP 10-002730).

Re claim 1, Shigeru discloses a method for the geometric measurement of a material strip **10**, in which the strip thickness is determined at at least one measuring point  $A_{11}$ ,  $A_{13}$ ,  $A_{14}$ ,  $A_{15}$ ,  $A_{16}$  arranged in the material strip **10** by means of a first measuring device **11**, **12** in which the thickness deviations of the material strip **10** are determined in the longitudinal direction by means of a second measuring device **13**, **14**, **15**, **16** and in which a correction of the measured values of the first measuring device is made by the measured values of the second measuring device [0014 – 0021] (Figs. 1-4).

Re claim 2, Shigeru discloses a method for the geometric measurement of a material strip **10** using radiation board thickness meters with a first measuring device **11**, **12** to determine the strip thickness at at least one measuring point  $A_{11}$ ,  $A_{13}$ ,  $A_{14}$ ,  $A_{15}$ ,  $A_{16}$

Art Unit: 2878

arranged in the material strip 10; and with a first evaluating means 17 to evaluate the measured values recorded by the first measuring device, wherein: a second measuring device 13, 14, 15, 16 is provided, second evaluating means 17 are provided to evaluate the thickness deviations recorded by the second measuring device [0014 – 0021] (Figs. 1-4).

Re claim 3, Shigeru discloses a device for the geometric measurement of a material strip 10: with a first measuring device 11, 12 to determine the strip thickness at points  $A_{11}$ ,  $A_{13}$ ,  $A_{14}$ ,  $A_{15}$ ,  $A_{16}$  arranged in predetermined intervals in the longitudinal direction of the material strip 10; and in which the thickness of the material strip 10 are determined at the measuring points  $A_{13}$ ,  $A_{14}$ ,  $A_{15}$ ,  $A_{16}$  by means of a second measuring device 13, 14, 15, 16 [0014 – 021].

Re claim 8, Shigeru discloses a method wherein the second measuring device is constructed to determine the thickness deviations and board profile of the material strip in the longitudinal direction and specifically at a plurality of points  $A_{13}$ ,  $A_{14}$ ,  $A_{15}$ ,  $A_{16}$  transverse over the strip [0014 – 0021] (Figs. 1-4).

Re claim 15, Shigeru discloses a device for the geometric measurement of a material strip 10 with a first measuring device 11, 12 to determine the strip thickness at at least one measuring point  $A_{11}$ ,  $A_{13}$ ,  $A_{14}$ ,  $A_{15}$ ,  $A_{16}$  arranged in the material strip 10 and with a first evaluating means 17 to evaluate the measured values recorded by the first measuring device, wherein a second measuring device 13, 14, 15, 16 is provided, second evaluating means 17 are provided to evaluate the measured values recorded by the second measuring device and correction means 17 are provided for correction of the measured values of the first measuring device by the measured values of the second

Art Unit: 2878

measuring device, wherein furthermore the second measuring device is constructed to determine the thickness deviations of the material strip in the longitudinal direction and specifically at a plurality of points  $A_{11}$ ,  $A_{13}$ ,  $A_{14}$ ,  $A_{15}$ ,  $A_{16}$  transverse over the strip [0014 – 0021] (Figs. 1-4).

Re claim 16, Shigeru discloses radiation meters [0004] with a first measuring device 11, 12 to determine the strip thickness at at least one measuring point  $A_{11}$ ,  $A_{13}$ ,  $A_{14}$ ,  $A_{15}$ ,  $A_{16}$  arranged in the material strip 10.

### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shigeru in view of Flormann (US 6,480,802).

Re claim 4, Shigeru discloses the claimed invention but fails specify detecting at different spatial angles. Flormann discloses a method comprising the step of detecting at different spatial angles (Col. 6, Fig. 3). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Shigeru in order to measure the thickness, width, contour and flatness of the strip by covering different solid angles.

Re claim 17, Shigeru discloses the claimed invention according to claim 16, but fails to specify at least two radiation sources. Flormann discloses a method wherein: at

Art Unit: 2878

least two radiation sources **10, 12** arranged transverse to the longitudinal direction and at a distance from another; a plurality of detectors **14, 16** arranged transverse to the longitudinal direction and at a distance from the sources **10, 12**; the material strip **2** is arranged between the radiation sources **10, 12** and the detectors **14, 16**; that in each case, two detectors **14, 16** are aligned on two different sources **10, 12**, and form a pair of detectors; that the axis formed in each case by the detectors **14, 16** of one pair and the sources **10, 12** intersect essentially in the area of the material strip **2** and a measurement point is therefore specified. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify in order to measure the thickness, contour, the shape and position over the width of a material strip.

#### **Allowable Subject Matter**

Claims 5-7 and 9-14, and 18-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Re claim 5, prior art discloses a method according to claim 1 but fails to recite the limitation wherein the second measuring device projects a line perpendicular to the longitudinal direction with which the shape and spatial location of the material strip along the line is determined.

Re claim 9, prior art discloses a method for determining the thickness of a board by measuring board thickness distribution by scanning the board in the longitudinal direction by a first and second measuring device. Prior art fails to specify a step wherein

Art Unit: 2878

the position of one measuring point inside the material strip is determined by the measured spatial location and shape of the material strip relative to a reference position.

Re claim 14, prior art discloses a method of measuring the edges and width of a material strip, but fails to specify limitation provided wherein the width is calculated from the spatial position of the edges of the material strip and the determined transverse contour of the material strip.

Re claim 18, prior art discloses a method wherein the second measuring device exhibits a laser projection device, but fails to specify the limitation wherein the second measuring means exhibits a camera for the acquisition of a projected line in a pixel matrix.

## **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hold (US 4,542,297) discloses an apparatus for measuring profile thickness of strip material.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus H. Taningco whose telephone number is (571) 272-1848. The examiner can normally be reached on M - F 8:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2878

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MT



DAVID PORTA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800